Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

| | |
|---|---|
| Permittee Name: | USG Corporation |
| Facility Name: | United States Gypsum Company – Norfolk Plant |
| Facility Location: | 1001 Buchanan Street<br>Norfolk, Virginia 23523 |
| Registration Number: | 60234 |
| Permit Number: | TRO-60234 |

This permit includes the following programs:

**Federally Enforceable Requirements - Clean Air Act (Sections I through XIII)**
**State Only Enforceable Requirements (Section XIV)**

June 17, 2004
Effective Date
May 15, 2007
Permit Amendment Date
June 16, 2009
Expiration Date

_____
Regional Director
May 15, 2007
Signature Date

Table of Contents, 2 pages
Permit Conditions, pages 4 - 40
Attachment A - CAM Plan

**Table of Contents**

# I. Facility Information

Permittee
USG Corporation
125 South Franklin Street
Chicago, Illinois 60606-4678

Responsible Official
David O. Bunch
Plant Manager

Facility
United States Gypsum Company – Norfolk Plant
1001 Buchanan Street
Norfolk, Virginia 23523

Contact Person
Chris Young
757-494-1904 ext. 121
fax; 757-545-6425

**County-Plant Identification Number:** 51-710-00068

**Facility Description:** NAICS 32742 – United States Gypsum manufactures gypsum wallboard, plasters, and industrial gypsum products.

The primary raw material is gypsum ore that is received by ship, then screened, crushed, dried and ground so that 90% passes a 100 mesh screen (landplaster). The processed landplaster enters the kettle calciners where hot flue gases drive off ¾ of the water to make stucco. The stuco can be directed to the wallboard process to make drywall or to the packing area where it is processed and formulated into plaster products.

The primary products from the Norfolk plant are wallboard, landplaster and the dried and bagged specialty plasters.

## II. Emission Units

Equipment to be operated consists of:

| Emission Unit ID | Stack ID | Emission Unit Description and Date of Manufacture | Size/Rated Capacity* | Fuel Type | Applicable Permit Date |
|---|---|---|---|---|---|
| **Fuel Burning Equipment** | | | | | |
| U1A | S2 | #2 Calcining Kettle (USG design, 1947) | 12 mmBtu/hour | Natural Gas | September 2, 2005 |
| U1B | S2 | #2 Calcining Kettle (USG design, 1947) | 12 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U2A | S13 | #3 Calcining Kettle (USG design, 1947) | 12 mmBtu/hour | Natural Gas | September 2, 2005 |
| U2B | S13 | #3 Calcining Kettle (USG design, 1947) | 12 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U3A | S15 | #4 Calcining Kettle (USG design, 1955) | 12 mmBtu/hour | Natural Gas | September 2, 2005 |
| U3B | S15 | #4 Calcining Kettle (USG design, 1955) | 12 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U4A | S16 | #5 Calcining Kettle (USG design, 1955) | 12 mmBtu/hour | Natural Gas | September 2, 2005 |
| U4B | S16 | #5 Calcining Kettle (USG design, 1955) | 12 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U5A | S17 | #6 Calcining Kettle (USG design, 1955) | 12 mmBtu/hour | Natural Gas | September 2, 2005 |
| U5B | S17 | #6 Calcining Kettle (USG design, 1955) | 12 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U6A | S3 | #1 Raymond Mill Aux. Burner, Hauck Mfg. model WRC572ZX (prior to 1963) | 4.5 mmBtu/hour | Natural Gas | September 2, 2005 |
| U6B | S3 | #1 Raymond Mill Aux. Burner, Hauck Mfg. model WRC572ZX (prior to 1963) | 4.5 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U7A | S5 | #3 Raymond Mill Aux. Burner, Hauck Mfg. model WR572 PRN 11912 (11/89) | 4.5 mmBtu/hour | Natural Gas | September 2, 2005 |
| U7B | S5 | #3 Raymond Mill Aux. Burner, Hauck Mfg. model WR572 PRN 11912 (11/89) | 4.5 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U8A | S14 | #5 Raymond Mill Aux. Burner, Hauck Mfg. model WR572 PRN 11912 (7/93) | 4.5 mmBtu/hour | Natural Gas | September 2, 2005 |
| U8B | S14 | #5 Raymond Mill Aux. Burner, Hauck Mfg. model WR572 PRN 11912 (7/93) | 4.5 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U9A | S6 | North Board Drying Kiln (USG design, 1955) | 48 mmBtu/hour | Natural Gas | September 2, 2005 |
| U9B | S6 | North Board Drying Kiln (USG design, 1955) | 48 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |

| | | | | | |
|---|---|---|---|---|---|
| U10A | S21 | South Board Drying Kiln (USG design, 1947) | 48 mmBtu/hour | Natural Gas | September 2, 2005 |
| U10B | S21 | South Board Drying Kiln (USG design, 1947) | 48 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U11A | S1 | Mixer Hot Water Boiler | 3.3 mmBtu/hour | Natural Gas | September 2, 2005 |
| U11B | S1 | Mixer Hot Water Boiler | 3.3 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |
| U12 | S31 | PST Heater, Hastings Heater MDH-423 model SBOF-112-3-423 (7/99) | 0.7 mmBtu/hour | Natural Gas | September 2, 2005 |
| U13A | S8 | General Plant Boiler, Cleaver Brooks CBH 200-40 (8/7/85) | 1.7 mmBtu/hour | Natural Gas | September 2, 2005 |
| U13B | S8 | General Plant Boiler, Cleaver Brooks CBH 200-40 (8/7/85) | 1.7 mmBtu/hour | #2 Fuel Oil | September 2, 2005 |

| **Process Operations** | | | | |
|---|---|---|---|---|
| **Emission Unit ID** | **Stack ID** | **Emission Unit Description** | **Size/Rated Capacity** | **Applicable Permit Date** |
| U1, Kettle | S32 | #2 Calcining Kettle (USG design, 1947) | 13 tons/hour – stucco | September 2, 2005 |
| U2, Kettle | S9 | #3 Calcining Kettle (USG design, 1947) | 13 tons/hour - stucco | September 2, 2005 |
| U3, Kettle | S4 | #4 Calcining Kettle (USG design, 1955) | 13 tons/hour - stucco | September 2, 2005 |
| U4, Kettle | S4 | #5 Calcining Kettle (USG design, 1947) | 13 tons/hour - stucco | September 2, 2005 |
| U5, Kettle | S4, S36 | #6 Calcining Kettle (USG design, 1947) | 13 tons/hour - stucco | September 2, 2005 |
| U6, Mill | S3 | #1 Raymond Mill 1947 | 20 tons/hour – crushed rock | September 2, 2005 |
| U7, Mill | S5 | #3 Raymond Mill 1947 | 25 tons/hour – crushed rock | September 2, 2005 |
| U8, Mill | S14 | #5 Raymond Mill 1947 | 20 tons/hour – crushed rock | September 2, 2005 |
| U9, Kiln | S6 | North Board Dryer Kiln 1947 | 100 feet/min gypsum board | September 2, 2005 |
| U10, Kiln | S21 | South Board Dryer Kiln 1947 | 100 feet/min gypsum board | September 2, 2005 |
| U11, boiler | S1 | Mixer Hot Water Boiler 1979 | 3.3 mmBtu/hour | September 2, 2005 |
| U12, PST System | S31, S38 | PST System 1978 | 40 tons/hour – stucco | September 2, 2005 |
| U13, Boiler | S8 | General Plant Boiler | 1.7 mmBtu/hour | September 2, 2005 |
| U14, Mill | S18 | #2 Raymond Mill, 1947 | 20 tons/hour – crushed rock | September 2, 2005 |
| U15, Mill | S4 | #4 Raymond Mill, 1955 | 20 tons/hour – crushed rock | September 2, 2005 |
| U16, Crusher | S7 | Gypsum Rock Crusher | 150 tons/hour–gypsum rock | May 27, 2003 |
| U17, Tank | F11 | Diesel Tank | 1000 gallons | N/A |
| U18, Anh. System | F21 | Anhydrite System | 15 tons/hour | N/A |

| | | | | |
|---|---|---|---|---|
| U19, Tank | F12 | Gasoline Tank | 1000 gallons | N/A |
| U20, Packer | S26 | White Packer | 7.5 tons/hour | September 2, 2005 |
| U21, Packer | S27 | Dark Packer | 7.5 tons/hour | September 2, 2005 |
| U22, Endsaw | S23 | Endsaw | 200 fpm line speed | September 2, 2005 |
| U23, Belt | S11, S24 | Board Stucco Cooling Tunnel Belt | 50 tons/hour | May 24, 1994 |
| U24, Machine | S10 | Dunnage Machine | 4 million $ft^2$/hour | April 5, 1994 |
| U25, Mill | S25 | Paper Fiber Mill | 2 tons/hour | September 2, 2005 |
| U26 | none | REMOVED | REMOVED | REMOVED |
| U27, Unloader | S12 | Sand and Lime Unloading System | 14 tons/hour | May 24, 1994 |
| U28, Airveyor | S28 | White Pack Spill Airveyor | 0.5 tons/hour | September 2, 2005 |
| U29, Mill | S29 | Tube Mill | 100 tons/hour | September 2, 2005 |
| U30, Unloader | S30 | Perlite Unloading System | 14 tons/hour | September 2, 2005 |
| U31, Stockpile | F1 | Dark Rock Stock Pile | 50,000 tons – gypsum rock | N/A |
| U32, Stockpile | F2 | White Rock Stock Pile | 9,000 tons – gypsum rock | N/A |
| U33, Stockpile | F3 | 420 Stock Pile | 40,000 tons-anhydrite rock | N/A |
| U34, Stockpile | F4 | 2 A Rock Stock Pile | 9,000 tons | N/A |
| U35, Stockpile | F5 | Gypsum Reclaim Stock Pile | 120,000 tons - reclaim | N/A |
| U36, Belt | S7 | Crushed Rock Belt | 150 tons/hour | May 27, 2003 |
| U37, Tank | F6 | #6 Fuel Oil Tank | 30,000 gallons | N/A |
| U38, Tank | F7 | #4 Fuel Oil Tank | 30,000 gallons | N/A |
| U39, Tank | F8 | #2 Fuel Oil Tank | 15,000 gallons | N/A |
| U40, Tank | F9 | West Waste Oil Tank | 2,500 gallons | N/A |
| U41, Tank | F10 | East Waste Oil Tank | 2,500 gallons | N/A |
| U42, Road Traffic | F13 | Paved Road Traffic | N/A | N/A |
| U43, Mill | S35 | HRA Ball Mill | 0.6 tons/hour | July 28, 2000 |
| U44, Airveyor | S37 | Packing Airveyor | 10.tons/hour | July 28, 2000 |
| U45, Screen | F16 | Trommel Screen | 50 tons/hour | May 27, 2003 |
| U46, Feeder | F17 | Rock Hopper w/ Pan Feeder | 150 tons/hour | N/A |
| U47, Belt | F18 | Rock Incline Belt | 150 tons/hour | May 27, 2003 |
| U48, Feeder | F19 | Reclaim Feeder | 50 tons/hour | May 27, 2003 |
| U49, Belt | F20 | Reclaim Incline Belt | 50 tons/hour | May 27, 2003 |
| U50, Drag Chain | S27 | Tube Mill Drag Chain | 100 tons/hour | September 2, 2005 |
| U51, Screw | S27 | Bulk Stucco Screw | 30 tons/hour | August 13, 2002 |
| U52, Spout | S27 | Bulk Stucco Loading Spout | 30 tons/hour | August 13, 2002 |

| | | | | |
|---|---|---|---|---|
| U53, Hopper | F14 | Ship Unloading Hopper w/ Pan Feeder | 2000 tons/hour | September 18, 2002 |
| U54, Conveyor | F15 | Ship Unloading Conveyor System | 2000 tons/hour | September 18, 2002 |
| U55, Packer | S20 | Anhydrite Packer | 15 tons/hour | September 2, 2005 |
| U56, Airveyor | S33, S34 | Landplaster Airveyor | 0.6 tons/hour | September 2, 2005 |

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

Pollution Control Equipment Consists of:

| **Pollution Control Equipment** | | | | | |
|---|---|---|---|---|---|
| **Unit Ref. No.** | **Stack No.** | **Control Equipment Description** | **Manufacturer and Date of Construction** | **PCD Efficiency** | **Pollutant** |
| U1 | S2 | No control device | No control device | | |
| U1 | S32 | Fabric Filter | Flex Kleen Mod#84-WRB-160XL | 99 % | TSP, PM10 |
| U2 | S13 | None | No control device | N/A | N/A |
| U2 | S9 | Fabric Filter | Flex Kleen Mod#84-WRB-160XL | 99 % | TSP, PM10 |
| U3 | S15 | None | No control device | N/A | N/A |
| U3 | S4 | Cottrell ESP | Research Cottrell Type 8 G-15 | 95 % | TSP, PM10 |
| U4 | S16 | None | No control device | N/A | N/A |
| U4 | S4 | Cottrell ESP | Research Cottrell Type 8 G-15 | 95 % | |
| U5 | S17 | None | No control device | N/A | N/A |
| U5 | S4 | Cottrell ESP | Research Cottrell Type 8 G-15 | 95 % | TSP, PM10 |
| U5 | S36 | Fabric Filter | Camcorp Model 3BHX9 | 99 % | TSP, PM10 |
| U6 | N/A | Cyclone | U. S. Gypsum design cyclone 1947 | N/A | N/A |
| U6 | S3 | Fabric Filter | Flex Kleen Mod#84-WRT-192XL-IIIG | 99 % | TSP, PM10 |
| U7 | N/A | Cyclone | U. S. Gypsum design cyclone 1947 | N/A | N/A |
| U7 | S5 | S20 | Flex Kleen Mod#84-WRT-192XL-III | 99 % | TSP, PM10 |
| U8 | N/A | Cyclone | U. S. Gypsum design cyclone 1947 | N/A | N/A |
| U8 | S14 | Fabric Filter | Airtrol, Inc. 195AW07 | 99 % | TSP, PM10 |
| U9 | S6 | None | No control device | N/A | N/A |
| U10 | S21 | None | No control device | N/A | N/A |
| U11 | S1 | None | No control device | N/A | N/A |
| U12 | S31 | Fabric Filter | Flex Kleen Mod#84-TC-80KD-III | 99 % | TSP, PM10 |
| U12 | S38 | Fabric Filter | Kinetic-air Mod30-RSC-36 | 99 % | TSP, PM10 |

| | | | | | |
|---|---|---|---|---|---|
| U13 | S8 | None | No control device | N/A | N/A |
| U14 | S18 | Fabric Filter | Flex Kleen Mod#84-WRT-192XL-IIIG | 99 % | TSP, PM10 |
| U14 | N/A | Cyclone | U. S. Gypsum design cyclone 1947 | N/A | N/A |
| U15 | N/A | Cyclone | U. S. Gypsum design cyclone 1955 | N/A | N/A |
| U15 | N/A | Cyclone | U. S. Gypsum design cyclone 1955 | N/A | N/A |
| U15 | S4 | Cottrell ESP | Research Cottrell Type 8 G-15 | 95 % | TSP, PM10 |
| U16 | S7 | Fabric Filter | Flex Kleen Mod#84-BVBS-25-II | 99 % | TSP, PM10 |
| U17 | F11 | None | No control device | N/A | N/A |
| U18 | F21 | Fabric Filter | Flex Kleen Mod#120-WXBC-216-IIIG | 99 % | TSP, PM10 |
| U19 | F12 | None | No control device | N/A | N/A |
| U20 | S26 | Fabric Filter | Flex Kleen Mod#TBR84-WMWC-150-III | 99 % | TSP, PM10 |
| U21 | S27 | Fabric Filter | Flex Kleen Mod#TBR84-WRBC-144-IIIG | 99 % | TSP, PM10 |
| U22 | S22 | Fabric Filter | Flex Kleen Mod#84-WRBS-96-II | 99 % | TSP, PM10 |
| U22 | S23 | Fabric Filter | Flex Kleen Mod#84-WRWS-96-IIG | 99 % | TSP, PM10 |
| U23 | S24 | Fabric Filter | Flex Kleen Mod#84-BVBCS-36-III | 99% | TSP, PM10 |
| U23 | S11 | Fabric Filter | Flex Kleen Mod#84-WSBS-49-IIIG | 99 % | TSP, PM10 |
| U24 | S10 | Fabric Filter | Flex Kleen Mod#100-WMWC-120-III | 99 % | TSP, PM10 |
| U25 | S25 | Fabric Filter | Flex Kleen Mod#84-WSWC-81-XL-III | 99 % | TSP, PM10 |
| U25 | N/A | Cyclone | U. S. Gypsum design cyclone | N/A | N/A |
| U27 | S12 | Fabric Filter | Flex Kleen Mod#100-C7BS-32-I | 99 % | TSP, PM10 |
| U28 | S28 | Fabric Filter | Semco Model#VF-80, SN 870778 | 99 % | TSP, PM10 |
| U29 | S29 | Fabric Filter | Seneca Model#132-IMTS-10 | 99 % | TSP, PM10 |
| U30 | S30 | Fabric Filter | Flex Kleen Mod#WSWS-64-II, SN E33009 | 99 % | TSP, PM10 |
| U31 | F1 | None | No control device | N/A | N/A |
| U32 | F2 | None | No control device | N/A | N/A |
| U33 | F3 | None | No control device | N/A | N/A |
| U34 | F4 | None | No control device | N/A | N/A |
| U35 | F5 | None | No control device | N/A | N/A |
| U36 | S7 | Fabric Filter | Flex Kleen Mod#84-BVBS-25-II | 99 % | TSP, PM10 |
| U37 | F6 | None | No control device | N/A | N/A |
| U38 | F7 | None | No control device | N/A | N/A |
| U39 | F8 | None | No control device | N/A | N/A |
| U40 | F9 | None | No control device | N/A | N/A |
| U41 | F10 | None | No control device | N/A | N/A |

| | | | | | |
|---|---|---|---|---|---|
| U42 | F13 | None | No control device | N/A | N/A |
| U43 | S35 | Fabric Filter | Flex Kleen Mod#84-BVBC-16 | 99 % | TSP, PM10 |
| U44 | S37 | Fabric Filter | Smoot Co. Mod#60-BV-25 | 99 % | TSP, PM10 |
| U44 | N/A | Cyclone | Smoot Co. Cyclone | N/A | N/A |
| U45 | F16 | None | No control device | N/A | N/A |
| U46 | F17 | None | No control device | N/A | N/A |
| U47 | F18 | None | No control device | N/A | N/A |
| U48 | F19 | None | No control device | N/A | N/A |
| U49 | F20 | None | No control device | N/A | N/A |
| U50 | S27 | Fabric Filter | Flex Kleen Mod#84-WRBC-144-IIIG | 99 % | TSP, PM10 |
| U51 | S27 | Fabric Filter | Flex Kleen Mod#84-WRBC-144-IIIG | 99 % | TSP, PM10 |
| U52 | S27 | Fabric Filter | Flex Kleen Mod#84-WRBC-144-IIIG | 99 % | TSP, PM10 |
| U53 | F14 | Wet Misting System | U. S. Gypsum design misting system | 60 % | TSP, PM10 |
| U54 | F15 | None | No control device | N/A | N/A |
| U55 | S20 | Fabric Filter | Flex Kleen Mod#84-BVBS-25-II | 99 % | TSP, PM10 |
| U56 | S34 | Fabric Filter | Smoot Co. Mod# 36BV25 | 99 % | TSP, PM10 |
| U56 | S33 | Fabric Filter | Smoot Co. Mod#36-BV1 | 99 % | TSP, PM10 |

*The Size/Rated capacity [and PCD efficiency] is provided for informational purposes only, and is not an applicable requirement.

# III. Gypsum Wallboard and Gypsum Products Process Equipment Requirements – (emission unit ID# U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U12, U14, U15, U20, U21, U22, U23, U25, U27, U28, U29, U30, U50 – U52, U55, U56)

## A. Limitations

1. **Emission Controls** - Particulate emissions from the following units shall be controlled by a dust collector. Each dust collector shall be provided with adequate access for inspection and shall be in operation when gypsum is being processed. Units with dust collectors are U1, U2, U5, U6, U7, U8, U12, U14, U20, U21, U22, U23 (West tunnel), U25, U27, U28, U29, U30, U50-U52, U55 and U56.

   (9 VAC 5-80-110 and Condition 3 of 9/2/2005 State Operating Permit)

2. **Emission Controls** - Particulate emissions from the following units shall be controlled by an electrostatic precipitator (ESP). The ESP shall be provided with adequate access for inspection and shall be in operation when gypsum is being processed in the subject units. Monitoring devices shall be installed in an accessible location and shall be maintained by the permittee such that all are in proper working order at all times. Units controlled by the ESP include U3, U4, U5, and U15.

   (9 VAC 5-80-110 and Condition 4 of 9/2/2005 State Operating Permit)

3. **Fuel** - The approved fuels for the gypsum wallboard and gypsum products facility are distillate oil and natural gas. Distillate oil is defined as fuel oil that meets the specifications for fuel oil number 1 or 2 under the American Society of Testing and Materials, ASTM "Standard Specifications for Fuel Oil". A change in the fuels may require a permit to modify and operate.

   (9 VAC 5-80-110 and Condition 7 of 9/2/2005 State Operating Permit.)

4. **Fuel** - The approved fuel for the PST Heater U12 is natural gas. A change in the fuel may require a permit to modify and operate.

   (9 VAC 5-80-110 and Condition 8 of 9/2/2005 State Operating Permit.)

5. **Fuel Throughput** - The combined throughputs for all fuel burning equipment at the facility shall not exceed 5,448,214 gallons of distillate oil, calculated monthly as the sum of each consecutive 12-month period. Total heat input from fuels for the facility is based on a total rated firing capacity of 175.2 million Btu/hour.

   (9 VAC 5-80-110 and Condition 9 of 9/2/2005 State Operating Permit)

6. **Fuel** - The distillate oil shall meet the ASTM specification for numbers 1 or 2 fuel oil: Maximum sulfur content per shipment is 0.5%.

   (9 VAC 5-80-110 and Condition 10 of 9/2/2005 State Operating Permit)

7. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:

   a. The name of the fuel supplier;

   b. The date on which the distillate oil was received;

   c. The volume of distillate oil delivered in the shipment;

   d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications for number 1 or 2 fuel oil.

   (9 VAC 5-80-110 and Condition 11 of 9/2/2005 State Operating Permit)

8. **Plantwide Emission Limits** – Emissions from the operation of the gypsum wallboard and gypsum products plant shall not exceed the limits specified below:

| | |
|---|---|
| Total Suspended Particulate | 188.4 tons/yr |
| PM-10 | 184.7 tons/yr |
| Sulfur Dioxide | 204.7 tons/yr |
| Nitrogen Oxides (as $NO_2$) | 94.0 tons/yr |
| Carbon Monoxide | 64.5 tons/yr |
| Volatile Organic Compounds | 14.5 tons/yr |

   These emissions are derived from the estimated overall emission contributions from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers III.A.1 to III.A.6, III.B.1&2 and NSR permits issued April 5, 1994, May 20, 1994, July 28, 2000, August 13, 2000, September 18, 2002 and May 27, 2003. (9 VAC 5-80-110, and Condition 12 of 9/2/2005 State Operating Permit)

9. **Existing Source Standard for Visible Emissions** – Unless specified otherwise in this part, no owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater than twenty (20) percent opacity, except during six-minute period in any one hour in which visible emissions shall not exceed sixty (60) percent opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section. This standard is applicable to all of the existing emission units listed in Condition 2 of the State Operating Permit issued September 2, 2005.

   (9 VAC 5-40-80, 9 VAC 5-80-110 and Condition 13 of 9/2/2005 State Operating Permit)

10. **Existing Source Standard for Particulate Matter** – No owner or other person shall cause or permit to be discharged into the atmosphere from any process unit and particulate emissions in excess of the limits as listed in Table 4-4A of the regulations at 9 VAC 5-40-260. This standard is applicable to all of the emission units listed in Table A-1 (attached).

    (9 VAC 5-40-80, 9 VAC 5-80-110, 9 VAC 5-40-940 and Condition 14 of 9/2/2005 State Operating Permit)

11. **Existing Source Standard for Particulate Matter; Fuel Burning Equipment** – No owner or other person shall cause or permit to be discharged into the atmosphere from any fuel burning equipment installation any gaseous products of combustion containing particulate emissions in excess of the following limits:

    a. For fuel burning equipment installations with total capacity less than 10 million Btu per hour, the maximum allowable emission ratio shall be 0.6 pounds of particulate per million Btu of heat input

    b. For fuel burning equipment installations with total capacity between 10 million and 10 billion (10,000 x 10^6) Btu per hour, the maximum allowable emission ratio 'E' in pounds of particulate per million Btu of heat input, shall be determined by the following equation:

    $$[ E = 1.0906*H^{-0.2594} ]$$

    Where 'H' is the total capacity in millions of Btu per hour heat input.

    This standard is applicable to the following emission units: U1 to U15.
    (9 VAC 5-40-940, 9 VAC 5-80-110 and Condition 15 of 9/2/2005 State Operating Permit)

12. **Existing Source Standard for Sulfur Dioxide; Fuel Burning Equipment** – No owner or other person shall cause or permit to be discharged into the atmosphere from any fuel burning equipment installation any sulfur dioxide emissions in excess of the following limit:

    **[ S = 2.64*K ],** where 'S' equals allowable emissions of sulfur dioxide expressed in pounds per hour and 'K' equals the heat input at total capacity expressed in Btu x 10^6 per hour. This standard is applicable to emission units U1 to U15.
    (9 VAC 5-40-930, 9 VAC 5-80-110 and Condition 16 of 9/2/2005 State Operating Permit)

13. **Boiler and Heater Operation** - Boiler and heater emissions shall be controlled by proper operation and maintenance. Boiler and heater operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall maintain records of the required training including names of trainees, a statement of time, place and nature of training provided. The permittee shall available good written operating procedures and a maintenance schedule for all boilers and heaters. Those procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by DEQ.

    (9 VAC 5-80-110 and Condition 17 of 9/2/2005 State Operating Permit)

## B. Monitoring

1. **Monitoring Devices** – Each dust collector shall be equipped with a device to continuously measure the differential pressure drop across the filters. The devices shall be installed in an accessible location and shall be maintained by the permittee such that all are in proper working order at all times. The ESP shall be provided with a monitoring device that adequately indicates the performance of the control device. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.

    (9 VAC 5-80-110 and Condition 5 of 9/2/2005 State Operating Permit)

2. **Monitoring Device Operation** - The monitoring device used to continually measure the differential pressure drop across the dust collectors shall be observed by the permittee with a frequency of once per month. The ESP monitoring device shall be observed once per week to ensure good performance. The permittee shall keep a log of the observations of the following ESP parameters (either hard copy or electronic file):

   a. Primary Volts, Primary Amps and Power input in Watts.

   b. Spark rate

   (9 VAC 5-80-110 and Condition 6 of 9/2/2005 State Operating Permit.)

## C. Recordkeeping

1. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

   a. Operation and control device monitoring records (logbook) for the differential pressure gauge readings and ESP parameter observations.

   b. Scheduled and unscheduled maintenance, including records of training and operation procedures for the stucco loadout equipment, the ship unloading system and the update reclaim system.

   c. The amount of distillate fired in all fuel burning units in gallons, calculated monthly as the sum of each consecutive twelve (12) month period.

   d. Fuel supplier certifications for all distillate oil received.

   These records shall be available on site for inspection by the DEQ and shall be current for the most recent (5) years.

   (9 VAC 5-80-110 and Condition 18 of 9/2/2005 State Operating Permit)

## D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested at the appropriate stack in accordance with the applicable performance specification (reference 40 CFR 60, Appendix B).

   (9 VAC 5-40-30, 9 VAC 5-80-110 and Condition 20 of 9/2/2005 State Operating Permit)

# IV. Dunnage Machine Requirements – (emission unit ID# U-24)

## A. Limitations

1. **Emission Controls** - Particulate emissions from the dunnage machine shall be controlled by the use of fabric filters. The fabric filters shall be provided with adequate access for inspection. The fabric filters shall be equipped with a device to continuously measure the differential pressure drop across the fabric filters. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times
(9 VAC 5-80-110, 9 VAC 5-50-260 and Condition 3 of NSR Permit issued 4/5/94)

2. **Throughput** - The annual throughput of dunnage shall not exceed 21,024 tons per year, calculated as the sum of each consecutive 12-month period.
(9 VAC 5-80-110 and Condition 5 of NSR Permit issued 4/5/94)

3. **Emission Limits** - Emissions from the operation of the dunnage machine, Unit U-24 shall not exceed the limits specified below:

| | | |
|---|---|---|
| Total Suspended Particulate | 1.5 lbs/hr | 6.6 tons/yr |
| PM-10 | 1.5 lbs/hr | 6.6 tons/yr |

These emissions are derived from the estimate overall emission contributions from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of the emission limits. Compliance with these emission limits may be determined as stated in Conditions III.A.1, 2, 5 and III.B.1.
(9 VAC 5-80-110 and Condition 6 of NSR Permit issued 4/5/94)

4. **Quality Improvement Plan** – The permittee shall develop a Quality Improvement Plan, according to 40 CFR 64.8 if more than five excursions from the indicator range specified in the Compliance Assurance Monitoring (CAM) Plan (Attachment A) occur within a semi-annual reporting period. An excursion shall be defined as the presence of detectable visible emissions. Semi-annual periods are as indicated by reporting requirements in condition XIII.C.3.

(9 VAC 5-80-110 and 40 CFR 64.8)

5. **Visible Emission Limit** - Visible Emissions from the fabric filter shall not exceed five-percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-110, 9 VAC 5-50-20 and Condition 7 of NSR Permit issued 4/5/94)

## B. Compliance Assurance Monitoring

For the fabric filter at the dunnage machine, the permittee shall conduct monitoring as specified in the Compliance Assurance Monitoring (CAM) Plan (Attachment A).

(9 VAC 5-80-110 and 40 CFR 64.6(c))

## C. Recordkeeping

1. **Onsite Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

   a. The yearly throughput of dunnage, calculated as the sum of each consecutive 12-month period.

   b. Documentation of monitoring required by the CAM Plan (Attachment A).

      (1) The date and time of observations, the name of the observer, and whether or not there were visible emissions.

      (2) Number of excursions in each semi-annual reporting period.

      (3) Corrective actions taken in response to excursions; and

      (4) If applicable, any written QIP required by Condition III.A.4 and 40 CFR 64.8 and any activities undertaken to implement a QIP.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five year period

   (9 VAC 5-80-110 and Condition 8 of NSR Permit issued 4/5/94)

2. **Maintenance Records** - In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

   b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

   (9 VAC 5-80-110 and Condition 12 of the NSR Permit issued 4/5/94)

3. **Training Records** - The permittee shall have available written operating procedures for the related air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedures. These procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including names of trainees, date of training and nature of training.

   (9 VAC 5-80-110 and Condition 13 of NSR Permit issued 4/5/94)

### D. Reporting

The permittee shall submit written reports containing the following information pertaining to the CAM Plan for the fabric filter at the dunnage machine, to the Director, Tidewater Regional Office, no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 B and shall include:

1. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective action taken;

2. A description of the actions taken to implement a QIP during the reporting period as specified at 40 CFR 64.8. Upon implementation of a QIP, the permittee shall include in the next summary report documentation that the plan has been completed and the reduced likelihood of similar levels of excursions.

The information listed above may be included in the reports required by Condition XII.C.3.

(9 VAC 5-80-110 and 40 CFR 64.9(a)(20))

## V. Sand and Lime Unloading Requirements and Cooling Belt Requirements – (emission unit ID# U-27 and U-23)

### A. Limitations

1. **Emission Controls** - Particulate emissions from the sand and lime unloading system shall be controlled by a fabric filter. Particulate emissions from the cooling belt exhaust system shall be controlled by another fabric filter. The fabric filters shall be provided with adequate access for inspection and shall be equipped with a device to continuously measure the differential pressure drop across the fabric filters. The fabric filters shall be maintained by the permittee such that they are in proper working order at all times.
(9 VAC 5-80-110 and Condition 3 of NSR Permit issued 5/20/94)

2. **Throughput** - The sand and lime unloading system shall convey no more than 10,950 tons of sand and lime combined per year, calculated monthly as the sum of each consecutive twelve (12) month period.
(9 VAC 5-80-110 and Condition 4 of NSR Permit issued 5/20/94)

3. **Throughput** - The cooling belt system shall convey no more than 420,480 tons of stucco per year, calculated monthly as the sum of each consecutive twelve- (12) month period.
(9 VAC 5-80-110 and Condition 5 of NSR Permit issued 5/20/94)

4. **Emission Limits** - Emissions from the operation of the cooling belt exhaust system shall not exceed the limits specified below:

| | | |
|---|---|---|
| Total Suspended Particulate | 0.1 lbs/hr | 0.6 tons/yr |
| PM-10 | 0.1 lbs/hr | 0.6 tons/yr |

These emissions are derived from the estimate overall emission contributions from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of the emission limits. Compliance with these emission limits may be determined as stated in Conditions IV.A.1, 2, 3, 5 and IV.B.1.

(9 VAC 5-80-110 and Condition 6 of NSR Permit issued 5/20/94)

5. **Visible Emission Limit** - Visible emissions from each fabric filter shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-110 and Condition 7 of the NSR Permit issued 5/20/94)

## B. Recordkeeping

1. **Onsite Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

   a. The yearly throughput of sand and lime combined, calculated as the sum of each consecutive 12-month period;

   b. The yearly throughput of stucco calculated monthly as the sum of each consecutive 12-month period.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five-year period.

   (9 VAC 5-80-110 and Condition 9 of NSR Permit issued 5/20/94)

2. **Maintenance Records** - In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

   b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

   (9 VAC 5-80-110 and Condition 13 of the NSR Permit issued 5/20/94)

3. **Training Records** - The permittee shall have available written operating procedures for the related air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedures. These procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including names of trainees, date of training and nature of training.

   (9 VAC 5-80-110 and Condition 14 of NSR Permit issued 5/20/94)

# VI. Packing Airveyor Requirements – (emission unit ID# U-43 and U-44)

## A. Limitations

1. **Emission Controls** - Particulate emissions from the packing airveyor and the ball mill shall be controlled by fabric filters. The fabric filters shall be provided with adequate access for inspection and shall be in operation when the equipment is operating.

   (9 VAC 5-80-110 and Condition 3 of NSR Permit issued 7/28/2000)

2. **Throughput** - The throughput of gypsum product at the packing airveyor shall not exceed 87,660 tons per year, calculated monthly as the sum of each consecutive 12-month period.

   (9 VAC 5-80-110 and Condition 6 of NSR Permit issued 7/28/2000)

3. **Throughput** - The ball mill shall process no more than 5,256 tons of landplaster per year, calculated monthly as the sum of each consecutive 12-month period.

   (9 VAC 5-80-110 and Condition 7 of NSR Permit issued 7/28/2000)

4. **Emission Limits** - Emissions from the operation of the packing airveyor and the board stucco cooling belt shall not exceed the limits specified below:

   | | | |
   |---|---|---|
   | Particulate Matter | 0.6 lbs/hr | 2.6 tons/yr |

   These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of the emission limits. Compliance with these emission limits may be determined as stated in Condition VI.A.1, 2, 7, VI.B.3 and VI.C.1.
   (9 VAC 5-80-110 and Condition 8 of the NSR Permit issued 7/28/2000)

5. **Emission Limits** - Emissions from the operation of the ball mill shall not exceed the limits specified below:

   | | | |
   |---|---|---|
   | Particulate Matter | 0.1 lbs/hr | 0.5 tons/yr |

   These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of the emission limits. Compliance with these emission limits may be determined as stated in Condition VI.A.1, 3, 7, VI.B.3 and VI.C.1.

   (9 VAC 5-80-110 and Condition 9 of the NSR Permit issued 7/28/2000)

6. **Quality Improvement Plan** – The permittee shall develop a Quality Improvement Plan, according to 40 CFR 64.8 if more than five excursions from the indicator range specified in the Compliance Assurance Monitoring (CAM) Plan (Attachment A) occur within a semi-annual reporting period. An excursion shall be defined as the presence of detectable visible emissions. Semi-annual periods are as indicated by reporting requirements in condition XIII.C.3.

   (9 VAC 5-80-110 and 40 CFR 64.8)

7. **Visible Emission Limit** – Visible emissions from the fabric filter outlets shall not exceed 5% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

   (9 VAC 5-80-110 and Condition 10 of NSR Permit issued 7/28/2000)

## B. Monitoring

1. **Compliance Assurance Monitoring** - For the fabric filter at the packing airveyor, the permittee shall conduct monitoring as specified in the Compliance Assurance Monitoring (CAM) Plan (Attachment A).

   (9 VAC 5-80-110 and 40 CFR 64.6(c))

2. **Monitoring Devices** – The fabric filters shall be equipped with a device (such as a magnahelic gauge) to continuously measure the differential pressure drop across the fabric filters. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the equipment is operating.

   (9 VAC 5-80-110 and Condition 4 of NSR Permit issued 7/28/2000)

3. **Monitoring Device Observation** – The gauges, used to continuously measure the differential pressure across the fabric filters shall be observed by the permittee with a frequency of not less than once per week.

   (9 VAC 5-80-110 and Condition 5 of NSR Permit issued 7/28/2000)

## C. Recordkeeping

1. **Onsite Records** - The permittee shall maintain records of all emission data and operating parameters as necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

   a. The annual throughput of gypsum products for the packing airveyor calculated monthly as the sum of each consecutive 12-month period.

   b. The annual throughput of landplaster for the ball mill calculated monthly as the sum of each consecutive 12-month period.

   c. Observations of the pressure drop across the fabric filters.

   d. Documentation of monitoring required by the CAM Plan (Attachment A).

      (1) The date and time of observations, the name of the observer, and whether or not there were visible emissions.

      (2) Number of excursions in each semi-annual reporting period.

      (3) Corrective actions taken in response to excursions; and

(4) If applicable, any written QIP required by Condition V.A.6 and 40 CFR 64.8 and any activities undertaken to implement a QIP.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110 and Condition 11 of NSR Permit issued 7/28/2000)

2. **Maintenance/Operating Procedures** – The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

   b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

   c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

   d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of the training and the nature of the training.

   Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

   (9 VAC 5-80-110 and Condition 18 of the NSR Permit issued 7/28/2000)

**D. Reporting**

The permittee shall submit written reports containing the following information pertaining to the CAM Plan for the fabric filter at the packing airveyor, to the Director, Tidewater Regional Office no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 B and shall include:

a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective action taken;

b. A description of the actions taken to implement a QIP during the reporting period as specified at 40 CFR 64.8. Upon implementation of a QIP, the permittee shall include in the next summary report documentation that the plan has been completed and the reduced likelihood of similar levels of excursions.

The information listed above may be included in the reports required by Condition XIII.C.3.

(9 VAC 5-80-110 and 40 CFR 64.9(a)(20))

# VII. Stucco Loadout Requirements – (emission unit ID# U-51 and U-52)

## A. Limitations

1. **Emission Controls** - Particulate emissions from the stucco loadout operation shall be controlled by fabric filters. The fabric filters shall be provided with adequate access for inspection and shall be in operation whenever the stucco loadout is operating.
(9 VAC 5-80-110 and Condition 3 of NSR Permit issued 8/13/2002)

2. **Monitoring Devices** - The fabric filters shall be equipped with devices to continuously measure the differential pressure drop across the fabric filter. Each monitoring device shall be provided with adequate access for inspection and shall be in operation whenever stucco is being downloaded to trucks.
(9 VAC 5-80-110 and Condition 4 of NSR Permit issued 8/13/2002)

3. **Throughput** - The throughput of stucco at the truck loadout shall not exceed 262,800 tons per year, calculated monthly as the sum of each consecutive twelve-month period.
(9 VAC 5-80-110 and Condition 6 of NSR Permit issued 8/13/2002)

4. **Visible Emission Limit** – Visible emissions from the stucco truck loadout operation shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-110 and Condition 7 of NSR Permit issued 8/13/2002)

## B. Monitoring and Recordkeeping

1. **Monitoring Device Observation** – The device used to continuously measure the differential pressure across the fabric filters shall be observed by the permittee with a frequency of not less than once per week. The permittee shall keep a log of the observations.

   (9 VAC 5-80-110 and Condition 5 of NSR Permit issued 8/13/2002)

2. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters as necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

   a. Annual throughput of stucco at the truck loadout, calculated monthly as the sum of each consecutive 12-month period.

   b. Operation and control device monitoring records (logbook) for the differential pressure gauge readings.

   c. Scheduled and unscheduled maintenance, including records of training and operation procedures, for the stucco loadout equipment.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five-year period.

   (9 VAC 5-80-110 and Condition 8 of NSR Permit issued 8/13/2002)

3. **Maintenance/Operating Procedures** – The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

   b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

   c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

   d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of the trainees, the date of training and the nature of the training.

   Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

   (9 VAC 5-80-110 and Condition 15 of the NSR Permit issued 8/13/2002)

## VIII. Ship Unloading System Requirements – (emission unit ID# U-53 and U-54)

### A. Limitations

1. **Emission Controls** - Particulate emissions from the surge hopper/pan feeder unit U-53 shall be controlled by a wet misting system. The misting system shall be provided with adequate access for inspection and shall be operational whenever the unloading system is operating. (9 VAC 5-80-110 and Condition 3 of NSR Permit issued 9/18/2002)

2. **Throughput** - The throughput of gypsum rock shall not exceed 500,000 tons per year, calculated monthly as the sum of each consecutive twelve-month period.
   (9 VAC 5-80-110 and Condition 4 of NSR Permit issued 9/18/2002)

3. **Visible Emission Limit** - Visible emissions from the ship unloading system shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction. (9 VAC 5-80-110 and Condition 5 of NSR Permit issued 9/18/2002)

### B. Recordkeeping

1. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters as necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

a. Annual throughput of gypsum rock at the ship unloading system, calculated monthly as the sum of each consecutive 12-month period.

b. Scheduled and unscheduled maintenance, including records of training and operation procedures, for the ship unloading system equipment.

These records shall be available for inspection by the DEQ and shall be current for the most recent five-year period.

(9 VAC 5-80-110 and Condition 6 of NSR Permit issued 9/18/2002)

2. **Maintenance/Operating Procedures** – The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of the trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-80-110 and Condition 13 of the NSR Permit issued 9/18/2002)

## IX. Updated Reclaim System Requirements – (emission unit ID# U-16, U-36, U-45, U-47, U-48 and U-49)

### A. Limitations

1. **Emission Controls** - Particulate emissions from the rock crusher, unit U-16 shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection and shall be operational whenever the crusher system is operating.

(9 VAC 5-80-110 and Condition 3 of NSR/NSPS Permit issued 5/27/2003)

2. **Fugitive Dust Emission Controls** – Fugitive dust and fugitive emissions controls shall include the following, or equivalent, as a minimum:

a. Dust from material handling shall be controlled by wet suppression or equivalent; total enclosures, or other methods as approved by DEQ.

b. All material stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.

c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals or equivalent methods approved by the DEQ.

(9 VAC 5-80-110, 9 VAC 5-50-260 and Condition 4 of NSR/NSPS Permit issued 5/27/2003)

3. **Throughput** – The throughput of gypsum rock for the rock crusher (U-16), the rock incline belt (U-47) and the crushed rock belt (U-36) shall not exceed 500,000 tons per year, calculated monthly as the sum of each consecutive 12-month period.

   (9 VAC 5-80-110, 9 VAC 5-80-1180 and Condition 7 of NSR/NSPS Permit issued 5/27/2003)

4. **Throughput** – The throughput of gypsum rock at the trommel screen (U-45) shall not exceed 60,000 tons per year, calculated monthly as the sum of each consecutive 12-month period.

   (9 VAC 5-80-110 9 VAC 5-80-1180 and Condition 8 of NSR/NSPS Permit issued 5/27/2003)

5. **Throughput** – The throughput of gypsum rock at the reclaim clay feeder (U-48) and the reclaim incline belt (U-49) shall not exceed 100,000 tons per year, calculated monthly as the sum of each consecutive 12-month period.

   (9 VAC 5-80-110, 9 VAC 5-80-1180 and Condition 9 of NSR/NSPS Permit issued 5/27/2003)

6. **Emission Limits** – The emissions from the operation of the rock crusher (U-16) shall not exceed the limits specified below:

| | | |
|---|---|---|
| Particulate Matter | 0.8 lbs/hr | 1.4 tons/yr |
| PM-10 | 0.4 lbs/hr | 0.7 tons/yr |

   These emissions are derived from the estimated overall contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition Nos. IX.A.1, 3, 10, IX.B.1, 3 and IX.C.1
   (9 VAC 5-80-110 and Condition 11 of NSR/NSPS Permit issued 5/27/2003)

7. **Emission Limits** – The emissions from the operation of the trommel screen (U-45) shall not exceed the limits specified below:

| | | |
|---|---|---|
| Particulate Matter | 7.5 lbs/hr | 4.5 tons/yr |
| PM-10 | 3.6 lbs/hr | 2.1 tons/yr |

   These emissions are derived from the estimated overall contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition Nos. IX.A.4, IX.B.1, 3 and IX.C.1.
   (9 VAC 5-80-110 and Condition 12 of NSR/NSPS Permit issued 5/27/2003)

8. **Reclaim System Emission Limits** – The emissions from the operation of the updated reclaim system, including the crusher (U-16), and the belt conveyors/screens (U-36, U-45, U-47, U-48 and U-49) shall not exceed the limits specified below:

| | |
|---|---|
| Particulate Matter | 5.9 tons/year |
| PM-10 | 2.8 tons/year |

These emissions are derived from the estimated overall contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition Nos. IX.A.1, IX.A.2, IX.A.3, IX.A.4, IX.A.5, IX.A.10, IX.B.2, 3 and IX.C.1. (9 VAC 5-80-110 and Condition 13 of NSR/NSPS Permit issued 5/27/2003)

9. **Quality Improvement Plan** – The permittee shall develop a Quality Improvement Plan, according to 40 CFR 64.8 if more than five excursions from the indicator range specified in the Compliance Assurance Monitoring (CAM) Plan (Attachment A) occur within a semi-annual reporting period. An excursion shall be defined as the presence of detectable visible emissions. Semi-annual periods are as indicated by reporting requirements in condition XIII.C.3.

   (9 VAC 5-80-110 and 40 CFR 64.8)

10. **Visible Emission Limit** – Visible emissions from the fabric filter exhaust shall not exceed 7 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). For units enclosed in a building, the opacity limit applies to the building vent, itself. This condition applies at all times except during startup, shutdown, and malfunction.

    (9 VAC 5-80-110, 40 CFR 60.672, and Condition 14 of NSR/NSPS Permit issued 5/27/2003)

11. **Standard for Particulate Matter –** On or after the date on which the performance test required by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors, or from any other affected facility any stack emissions which:

    a. Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf); and

    b. Exhibit greater than 7 percent opacity from the stack or vent.

    (9 VAC 5-80-110, 40 CFR 60.672 (a)(1) & (a)(2) and Condition 10 of NSR/NSPS Permit issued 5/27/2003)

12. **Requirements by Reference** – Except where this permit is more restrictive than the applicable requirement, the NSPS equipment (U-16, U-36 and U-47) shall be operated in compliance with the requirements of 40 CFR 60, Subpart 'OOO'.

    (9 VAC 5-80-110, 9 VAC 5-50-410, 40 CFR 60, Subpart 'OOO' and Condition 15 of NSR/NSPS Permit issued 5/27/2003)

13. **Permit Invalidation** – This permit to install the updated reclaim system equipment shall become invalid, unless an extension is granted by the DEQ, if:

    a. A program of continuous construction is not commenced before the latest of the following:

(1) 18 months from the date of the NSR/NSPS permit issued May 27, 2003;

(2) Nine months from the date that the last permit or other authorization was issued from any other governmental agency;

(3) Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

b. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-110, 9 VAC 5-80-1210 and Condition 18 of NSR/NSPS Permit issued May 27, 2003)

## B. Monitoring

1. **Compliance Assurance Monitoring** - For the fabric filter at the rock crusher, the permittee shall conduct monitoring as specified in the Compliance Assurance Monitoring (CAM) Plan (Attachment A).

   (9 VAC 5-80-110 and 40 CFR 64.6(c))

2. **Monitoring Devices** – The fabric filter on the rock crusher shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with the manufacturer's written recommendations. The monitoring device shall be provided with adequate access for inspection and shall be operational whenever the crusher system is operating.

   (9 VAC 5-80-110 and Condition 5 of NSR/NSPS Permit issued 5/27/2003)

3. **Monitoring** – In addition to the CAM monitoring, the following monitoring practices shall be accomplished on a monthly basis to ensure compliance with the facility's particulate and visible emission limits:

   a. Observe the device used to measure the pressure drop across the fabric filter;

   b. Observe the fabric filter vent to ensure compliance with the limit in Condition IX.A.10.

   The permittee shall keep a log of the observations from the monitoring practices, above.

   (9 VAC 5-80-110 and Condition 6 of NSR/NSPS Permit issued 5/27/2003)

## C. Recordkeeping

1. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters as necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

   a. Annual throughput of gypsum rock for the updated reclaim system, including the rock crusher (U-16), the trommel screen (U-45) and the conveyor belts (U-36, U-47, U-48 and U-49) calculated monthly as the sum of each consecutive 12-month period.

   b. Logbook entries for the monitoring required for the fabric filter assembly.

   c. Records of any Method 9 observations performed for the fabric filters and/or crusher building, including the results of such testing.

   d. Scheduled and unscheduled maintenance, including records of training and operation procedures, for the updated reclaim system equipment.

   e. Documentation of monitoring required by the CAM Plan (Attachment A).

      (1) The date and time of observations, the name of the observer, and whether or not there were visible emissions.

      (2) Number of excursions in each semi-annual reporting period.

      (3) Corrective actions taken in response to excursions; and

      (4) If applicable, any written QIP required by Condition IX.A.9 and 40 CFR 64.8 and any activities undertaken to implement a QIP.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five-year period.

   (9 VAC 5-80-110 and Condition 16 of NSR/NSPS Permit issued 5/27/2003)

2. **Maintenance/Operating Procedures** – The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

   b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

   c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of the trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-80-110 and Condition 13 of the NSR Permit issued 9/18/2002)

## D. Notifications and Reporting

1. **Initial Notifications** – The permittee shall furnish notification to the Director, Tidewater Regional Office:

   a. The actual date on which installation of the updated reclaim system equipment commenced within 30 days after such date.

   b. The anticipated start-up date of the updated reclaim system equipment postmarked not more than 60 days nor less than 30 days prior to such date.

   c. The actual start-up date of the updated reclaim system within 15 days after such date.

   d. The anticipated date of performance tests of the updated reclaim system, postmarked at least 30 days prior to such date.

   Copies of the written notification referenced in items a through d, above, shall be sent to:

   Office of Air Enforcement (3AP10)
   U. S. Environmental Protection Agency
   Region III
   1650 Arch Street
   Philadelphia, PA 19103-2029

   (9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 17 of NSR/NSPS Permit issued 5/27/2003)

2. The permittee shall submit written reports containing the following information pertaining to the CAM Plan for the fabric filter at the rock crusher, to the Director, Tidewater Regional Office no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 B and shall include:

   a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and the corrective action taken;

   b. A description of the actions taken to implement a QIP during the reporting period as specified at 40 CFR 64.8. Upon implementation of a QIP, the permittee shall include in the next summary report documentation that the plan has been completed and the reduced likelihood of similar levels of excursions.

   The information listed above may be included in the reports required by Condition XIII.C.3.

   (9 VAC 5-80-110 and 40 CFR 64.9(a)(20))

# X. Facility Wide Conditions

## A. Limitations

1. **Testing/Monitoring Ports** – The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
   (9 VAC 5-80-110 and Condition 4 of NSR Permit issued 4/5/94)

2. **New Source Standard for Visible Emissions** – No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater than twenty (20) percent opacity, except for one six-minute period in any one hour of not more than thirty (30) percent opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this condition. This standard is applicable to U-16, U-23, U-24, U-27 and U-43 to U-56).
   (9 VAC 5-50-80 and 9 VAC 5-80-110)

# XI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

| Emission Unit No. | Emission Unit Description | Citation | Pollutant(s) Emitted (9 VAC 5-80-720 B) | Rated Capacity (9 VAC 5-80-720 C) |
|---|---|---|---|---|
| U-11A | Mixed Hot Water Boiler – Natural Gas | 9 VAC 5-80-720B | NOx, SO2, PM10, VOC, CO | less than 5 mmBtu per hour |
| U-11B | Mixed Hot Water Boiler - #2 fuel oil | 9 VAC 5-80-720B | NOx, SO2, PM10, VOC, CO | less than 5 mmBtu per hour |
| U-12 | PST System Heater | 9 VAC 5-80-720B | NOx, PM10, VOC, CO | less than 5 mmBtu per hour |
| U-13A | General Plant Boiler – Natural Gas | 9 VAC 5-80-720B | NOx, PM10, VOC, CO | less than 5 mmBtu per hour |
| U-13B | General Plant Boiler - #2 fuel oil | 9 VAC 5-80-720B | NOx, SO2, PM10, VOC, CO | less than 5 mmBtu per hour |
| U-17 | Diesel Tank | 9 VAC 5-80-720B | VOC | 1000 gallons |
| U-18 | Anhydrite System | 9 VAC 5-80-720B | PM10 | 15 tons per hour |
| U-19 | Gasoline Tank | 9 VAC 5-80-720B | VOC | 1000 gallons |
| U-37 | #6 Fuel oil tank | 9 VAC 5-80-720B | VOC | 30,000 gallons |
| U-38 | #4 Fuel oil tank | 9 VAC 5-80-720B | VOC | 30,000 gallons |
| U-39 | #2 Fuel oil tank | 9 VAC 5-80-720B | VOC | 15,000 gallons |
| U-40 | West waste oil tank | 9 VAC 5-80-720B | VOC | 2500 gallons |
| U-41 | East waste oil tank | 9 VAC 5-80-720B | VOC | 2500 gallons |
| U-42 | Paved Roads | 9 VAC 5-80-720B | PM and PM10 | N/A |

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

## XII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

| Citation | Title of Citation | Description of Applicability |
|---|---|---|
| 40 CFR 60.730, Subpart UUU | Standards of Performance for Calciners and Dryers in Mineral Industries | Units U-1, U-2, U-3, U-4 and U-5 constructed before 4-23-86, so are not subject to UUU. |
| 40 CFR 60.672, Subpart OOO | Standards of Performance for Nonmetallic Mineral Processing Plants | Units U-6, U-7, U-8, U-14 & U-15 constructed before 8-31-83, so are not subject to OOO. |
| 40 CFR 60.730, Subpart UUU | Standards of Performance for Calciners and Dryers in Mineral Industries | Units U-9 and U-10 are not subject to this part. Tunnel dryers are exempt. |
| 40 CFR 52 | New Source Review | There are no modifications to the plant at this time. |
| 40 CFR 60, Subpart Kb | Standards of Performance for Volatile Organic Liquid Storage Vessels | Subpart Kb has been amended to exempt those storage vessels previously subject to recordkeeping requirements only. |
| 9 VAC 5-50, Article 3<br>9 VAC 5-40, Article 3 | Standards for Toxic Pollutants | The U.S. Gypsum facility does not emit toxic pollutants above the exemption levels. |

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-140)

## XIII. General Conditions

### A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

### B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

## C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

   a. The date, place as defined in the permit, and time of sampling or measurements.

   b. The date(s) analyses were performed.

   c. The company or entity that performed the analyses.

   d. The analytical techniques or methods used.

   e. The results of such analyses.

   f. The operating conditions existing at the time of sampling or measurement.

   (9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

   (9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

   a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

   b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

      (1) Exceedance of emissions limitations or operational restrictions;

      (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

      (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

   c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

   (9 VAC 5-80-110 F)

**D. Annual Compliance Certification**

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. The identification of each term or condition of the permit that is the basis of the certification.

3. The compliance status.

4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

6. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-80-110 K.5)

**E. Permit Deviation Reporting**

The permittee shall notify the Director, Tidewater Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition XIII.C.3 of this permit.

(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

**F. Failure/Malfunction Reporting**

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Tidewater Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Tidewater Regional Office.

(9 VAC 5-20-180 C)

**G. Severability**

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

**H. Duty to Comply**

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

**I. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

**J. Permit Modification**

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.

(9 VAC 5-80-190 and 9 VAC 5-80-260)

**K. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege.

(9 VAC 5-80-110 G.5)

**L. Duty to Submit Information**

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.

   (9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.

   (9 VAC 5-80-110 K.1)

**M. Duty to Pay Permit Fees**

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.

(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

**N. Fugitive Dust Emission Standards**

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

**O. Startup, Shutdown, and Malfunction**

At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E and 9 VAC 5-40-20 E)

**P. Alternative Operating Scenarios**

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.

(9 VAC 5-80-110 J)

**Q. Inspection and Entry Requirements**

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

**R. Reopening For Cause**

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

**S. Permit Availability**

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

**T. Transfer of Permits**

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.

   (9 VAC 5-80-160)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.

   (9 VAC 5-80-160)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.

   (9 VAC 5-80-160)

**U. Malfunction as an Affirmative Defense**

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

d. The permittee notified the Board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

**V. Permit Revocation or Termination for Cause**

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C and 9 VAC 5-80-260)

**W. Duty to Supplement or Correct Application**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

**X. Stratospheric Ozone Protection**

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.

(40 CFR Part 82, Subparts A-F)

**Y. Asbestos Requirements**

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).

(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

**Z. Accidental Release Prevention**

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.

(40 CFR Part 68)

**AA. Changes to Permits for Emissions Trading**

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

(9 VAC 5-80-110 I)

**BB. Emissions Trading**

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

## XIV. State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

1. 9 VAC 5-50-140 Standard for Odorous Emissions
2. 9 VAC 5-60-320 Standard for Toxic Pollutants

(9 VAC 5-80-110 N and 9 VAC 5-80-300)

# United States Gypsum
# Norfolk, VA

# COMPLIANCE ASSURANCE MONITORING PLAN

**Registration No. 60234**

I. Background

A. Emission Unit

| | |
|---|---|
| Description: | Dunnage Machine, U-24, Packing Airveyor, U-44 and Rock Crusher, U-16 |
| Identification | S10, S37 and S7 fabric filter stacks |
| Facility: | Norfolk Board Plant<br>Norfolk, VA |

B. Applicable Regulations, Emission Limit, and pre-CAM Monitoring Requirements

| | |
|---|---|
| Regulation: | 9 VAC 5-50-260 |
| CAM Emission Limits | U-24/S10 = 1.5 lbs/hour PM/PM10<br>U-44/S37 = 0.6 lbs/hour PM<br>U-16/S7 = 0.8 lbs/hour PM, 0.4 lbs/hr PM10, and<br>Particulate Matter: 0.01 gr/dscf, PM-10: 0.01 gr/dscf |
| Pre CAM Monitoring | U-24: Visible emissions from exhaust stack shall not exceed 5% Opacity as determined by EPA Method 9.<br>U-44 – 5% opacity and U-16 – 7% opacity. |

C. Control Technology, Capture System, Bypass, and PTE

| | |
|---|---|
| Controls: | S10 - Dust Filter, pulse air bag cleaning fabric filter;<br>S37 – Dust Filter, pulse air bag cleaning fabric filter, S7 – Dust Filter, pulse air bag cleaning fabric filter. |
| Capture System: | Continuous duct-closed system |
| Bypass: | None |
| PTE Before Controls: | Dunnage Machine – 660 TPY (Assumed 99% coll. eff.)<br>Packing Airveyor – 260 TPY (Assumed 99% coll. eff.)<br>Rock Crusher – 140 TPY (Assumed 99% coll. eff.) |
| PTE After Controls: | Dunnage Machine – 6.6 TPY<br>Packing Airveyor – 2.6 TPY<br>Rock Crusher – 1.4 TPY |

II Monitoring Approach

A. Indicators

Visible emissions will be used as an indicator. Normal process operations will not produce conditions that adversely affect the fabric filters, so no process operational parameters will be monitored.

B. Measurement Approach and Frequency

Visible emissions from the fabric filter exhaust will be monitored daily using the following procedure: A one-minute observation will be performed and the results recorded in a logbook by the observer.

C. Indicator Range

An excursion is defined as the presence of visible emissions and no averaging is allowed.

D. Performance Criteria

| | |
|---|---|
| Data Representation: | Measurements are being made at the point of emission (fabric filter exhaust). |
| Monitoring Practices and Criteria: | The permittee shall perform a daily visual emissions observation on each stack during normal operations. If such visual observation indicates the presence of any visible emissions, the permittee shall take corrective action to eliminate the visible emissions. |
| Data Collection: | The permittee shall record the details of the visual emissions observations, VEE and any corrective actions taken. The records shall be kept at the facility and made available for inspection by the DEQ for the most recent five (5) year period. |

III Response to Excursion

A. Upon noting visible emissions, the observer will immediately notify maintenance to inspect the fabric filter, and control center to slow down production as feasible. Maintenance personnel will inspect the baghouse within 4 hours of receiving notification and make needed repairs as soon as practicable. Operations will return to normal upon completed corrective action.

B. QIP Threshold: Five excursions in a six–month reporting period.

# JUSTIFICATION

Background

The pollution specific units are "Dunnage Machine, Packing Airveyor and Rock Crusher" (Emission Units U24, U44 and U16). The fabric filter exhausts have the stack designations as S10, S37 and S7 respectively. The dunnage machine is controlled by a Flex Kleen Mod# 100WMWC-120-III fabric filter unit with 120 bags that filters approximately 8,670 CFM of air. The packing airveyor is controlled by a Smoot Co. Mod#60-BV-25 fabric filter unit with 25 bags that filters approximately 800 CFM of air and the rock crusher is controlled by a Flex Kleen Mod#84-BVBS-25-II fabric filter unit with 25 bags that filters approximately 1300 cfm. All the gypsum processing equipment has a continuous duct-closed-system to the fabric filters. There is no means for the control equipment to be bypassed.

Rationale for Selection of Performance Indicators

Visible emissions was selected as the performance indicator because it is indicative of good operation and maintenance of fabric filters. When the fabric filters are operating properly, there will not be any visible emissions from the exhaust. Any detectable visible emissions indicates reduced performance of a particulate control device; therefore, the presence of visible emissions is used as a performance indicator.

Rationale for Selection of Indicator Ranges

The selected indicator range varies from no detectable emissions to any detectable visible emissions. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. This particular indicator range of visible emissions was selected because: (1) any detectable visible emissions is indicative of an increase in particulate emissions; and (2) it is a monitoring technique which does not require a Method 9 certified observer.

The selected QIP threshold for baghouse visible emissions is five excursions in a six–month reporting period. This level is approximately 3% of the total visible emissions observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.